REMARKS

Claims 2, 4-6 are pending in the application. The amendments to the claims have been made to further clarify the claimed invention. Newly added claim 6 finds support in claim 2, in which the "consisting of" language is recited. No new matter has been introduced, and entry of the above revised claims is respectfully requested.

Telephonic Interview With Examiner

Applicant's representative thanks Examiner Gough for courtesies extended during the interview held on November 25, 2009. During the interview, the nature of the invention and the content of the specification were discussed. The Examiner sought more background information with the next submission.

Background for the subject matter of the present invention as claimed

By way of background, it is known that animals have the ability to sense electromagnetic signals. For instance, a school of fish detects the sudden appearance of a shark or another natural enemy and the fish instantly spread out or run away. The scales of living fish possess structures that detect and process electromagnetic signals given off by their natural enemies. It is believed that even the "processing" of the information is carried out within the scales. The epidermis of land animals also possesses this ability to sense electromagnetic signals. For example, during a tsunami, animals detect certain electromagnetic waves and rush to higher ground. Animals recognize danger well ahead of humans. It is believed that their heightened sensitivity to types of electromagnetic waves plays a key role in danger avoidance.

Microscopic examination of the epidermis of fish and other animals show that they possess very fine folded layers of molecules, which are believed to play a role in the epidermis detecting the electromagnetic signals. Thus, these "developed" epidermis from live animals are isolated and processed in such a way to retain the layers of electromagnetic signal sensitive molecules. They are then adapted and applied to be used as supersensitive "sensor" by coupling the obtained epidermis to an electric circuitry such as a battery charged probe so that the sensed signal through the epidermal bio-material may be electronically read and displayed. Further, the epidermal bio-material needs to be further processed so that it fits with the design of the probe.

The Examiner's attention is directed to Exhibits A and B, which illustrates how the inventive biomaterial is to be connected to sensor/probe configurations for detecting electromagnetic signals radiating from other organisms. Exhibit A shows drawings taken from U.S. Application Serial No. 12/278,772, filed August 22, 2008, titled "Sensor For Detecting Biological Electro-Magnetic Signal And The Diagnostic Device Using The Same". Exhibit B shows drawings taken from U.S. Application Serial No. 12/280,766, filed September 11, 2008, titled "Real-Time Diagnostic System Employing Non-Invasive Method To Analyze Electro-Magnetic Field Radiated From A Subject And The Variation Thereof". The present inventor is also the inventor in these co-pending applications. As can be seen from the drawings, it is clear that the bio-material epidermis of the present invention is used in conjunction with electronic processors to detect the electromagnetic signals radiating from other organisms.

To explain further the structural characteristics of the electromagnetic signal sensor present in the epidermis, the following discussion is provided. The nano bio-sensor in the epidermis consists of hundreds or thousands of angstrom thin microscopic film optics layers of bio polymer macromolecular rings. These interconnected layers create periodic structure, not limited to plan layers, are known as photonic crystal a non-linear, asymmetrical, and discrete oscillator. The makeup of the layers allows it to maintain its shape, yet allows for high flexibility and elasticity. The nano bio-sensor detects the external reactions of pathological signals using the optical, physical, and electrical oscillation of the multilayer structure. Strong harmonic is generated. Morevoer, the characteristics of the adjacent multi-layers of the nanobiosensor differ optically and physically. These distinct differences in refraction and permittivity are repeated in subsequent layers. These characteristics generate nonlinearity and optical harmonic generation when phase synchronization is satisfied, an interval of time that an event, chain of events, instance or happening, takes place within. It is measured between a start point and an end point and generally repeats, or progresses, in a cycle with the end point of one period being the start point of the next, amplifying and strengthening signals through the repeated periodic system. Therefore, it is the presence of these nano size structures that are present in the epidermis, which allows the animals to sense electromagnetic signal and modify their behavior.

The Examiner's attention is directed to Exhibit C, which shows an electron microscope of fish epidermis, which shows the presence of layers of 10-20 angstrom macromolecules.

In one aspect of the invention, an animal may be studied for its electromagnetic sensing abilities and its responsive behavior, and its epidermis may be processed and obtained based on the individual and unique reaction of the animal to electromagnetic signals. The developed epidermis may be isolated from these animals and may be coupled to a sensor probe and applied in a similar setting and function to detect similar types of electromagnetic radiation as when the animal was alive.

Based on carrying out such experiments of using the solid bio-material epidermis discussed above, the Applicant developed a diagnostic system for detecting onset of disease in a person or animal by analyzing electromagnetic signal radiated from human and animals. In particular, the Applicant has invented a real time disease diagnostic system capable of analyzing micro electromagnetic signal radiated from cells, tissues and organs of a human or animal by bringing the processed epidermis coupled to an electronic circuitry in close proximity to the subject and "reading" the electromagnetic radiation generated from the subject. Applicant carried out experiments at government approved pre-clinical research center. The overall results show that cancer diagnostic accuracy rate in mice was 95.9% out of a total of 656 experiments.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-5 have been rejected as failing to comply with the enablement requirement. In particular, the Examiner indicates that the specification provides enabling description directed to living organism, but not to carcasses. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested.

The present application provides description of solid bio-material from epidermal tissues of living tissue and carcasses for the detection of an electromagnetic signal. Treatment of a carcass is supported in the specification at least at pages 16-18. For instance, the Examiner is directed to following passage at page 16 (Amended Sheet (Art. 34)) lines 15-20:

> The object of our invention is a solid bio-material for the detection of a bio-electromagnetic signal by using epidermal tissues of living organisms by the method of: immersing the carcass of the living organism with the epidermis of living organisms, scales which have been generated from dermis, as well as the deformation of skin which came from a degeneration or keratinization of scales, fish scales, the scales or horny substances of a

Page 17 (Amended Sheet (Art. 34)) lines 8-11 states:

> Let's take a detailed look at the methods for producing the solid bio-material for the detection of a bio-electromagnetic signal by using epidermal tissues of living organisms by: immersing the carcass of the living organism with the epidermis of living organisms, scales which

As can be seen above, carcass is clearly described.

Moreover, the Disclosure of the Invention on page 16 (Amended Sheet (Art. 34)), makes it clear that the invention seeks the creation and use of epidermal tissue that has been separated from the rest of the organism but still has characteristics of the epidermis of the once-living organism. One of skill in the art would understand that the invention seeks the creation of bio-material that has the characteristics of the epidermis similar to those found in living organisms.

The structural component (e.g., nano-sized macromolecular layers) in the epidermis that senses electromagnetic signals is present in both living and dead epidermis. The structural molecules that are able to "sense" electromagnetic radiation still resides in the "dead" epidermis and is active if the epidermis is isolated and processed under the right conditions so that the particular sensing structures of the epidermis are not destroyed. The present invention exploits this phenomenon of a technically dead epidermis to still "sense" electromagnetic signals (which in accordance with the invention is measured by coupling the epidermis with an electronic probe) to diagnose cancer in an animal and so forth by bringing the epidermis/probe in close proximity to the subject (see paragraphs [0027] to [0033] in the published application no. US20060029925). Accordingly, it is believed that the presently claimed invention is fully enabled by the specification.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-5 have been rejected as failing to comply with the written description requirement. In particular, the Examiner alleges that the specification does not support the language "about". Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested. The amended claims do not recite "about". Accordingly, it is believed that this rejection has been overcome.

Rejection Under 35 U.S.C. §102(e) Over Chaplen '877 (USP 6,913,877)

Claims 1 and 3 have been rejected under 35 U.S.C. §102(e) as being anticipated by Chaplen '877. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested. Although Applicant disagrees with this rejection, claims 1 and 3 have been canceled in order to expedite prosecution of this application. Accordingly, it is believed that this rejection has been overcome.

Rejection Under 35 U.S.C. §102(b) Over Elwing (Biosensors & Bioelectronics, 1990, pp. 449-459)

Claims 1 and 3 have been rejected under 35 U.S.C. §102(b) as being anticipated by Elwing. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested. Although Applicant disagrees with this rejection, claims 1 and 3 have been canceled in order to expedite prosecution of this application. Accordingly, it is believed that this rejection has been overcome.

Rejection Under 35 U.S.C. §102(b) Over Athenstaedt (Science, 1982, pp. 1018-1020)

Claims 1 and 3 have been rejected under 35 U.S.C. §102(b) as being anticipated by Athenstaedt. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested. Although Applicant disagrees with this rejection, claims 1 and 3 have been canceled in order to expedite prosecution of this application. Accordingly, it is believed that this rejection has been overcome.

Claims free of prior art

Applicant notes that claims 2 and dependent claims 4 and 5 are free of prior art.

Conclusion

It is believed that the instant application is now in condition for allowance. Applicant requests the Examiner to issue a notice of Allowance in due course. The Examiner is encouraged to contact the undersigned to further the prosecution of the present invention.

The Commissioner is authorized to charge JHK Law's Deposit Account No. 502486 for any fees required under 37 CFR §§1.16 and 1.17 that are not covered, in whole or in part, by a credit card payment enclosed herewith and to credit any overpayment to said Deposit Account No. 502486.

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Respectfully submitted,

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